

CLAIMS:

1. A surgical device for use in minimally invasive surgery of the type using an inflated body cavity accessible to a surgeon through an access port, defined by the device,  
5 surrounding an incision in a patients body, the device having: -  
  
body cavity engagement means for insertion into the incision to locate the device in position;  
  
10 fixing means for attaching the device to a patients skin;  
  
a sleeve connected between the body cavity engagement means and the fixing means defining an access port; and  
  
15 sealing means, operating on the sleeve to prevent substantial leakage of gas from the body cavity on inflation when in an inoperative position and formed to mould a substantial portion of a surgeon's hand or surgical instrument on insertion in an operating position.
- 20 2. A surgical device as claimed in Claim 1 in which the body cavity engagement means is provided by a distal ring formed for insertion into the incision.
3. A surgical device as claimed in Claim 2, in which the distal ring has an associated cuff valve operating on the internal faces of an impermeable film, the film being located  
25 between semi rigid actuators, the actuators in turn being secured in substantially parallel manner to a distal ends of the sleeve.
4. A surgical device as claimed in Claim 3, in which the actuators are housed in opposing cuff, each cuff being formed by folding an end of a distal tube to form a pocket  
30 for reception of the actuator.

5. A surgical device as claimed in Claim 3 or Claim 4, in which the actuators incorporate a bio-compatible medical grade foam layer to generate tension between opposing faces of the film and to operate as a cushion between the actuators and objects inserted through the cuff valve.

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6. A surgical device as claimed in Claim 2, in which the distal ring has an associated self-sealing valve.

7. A surgical device as claimed in any one of the preceding claims, in which the fixing means is provided by a proximal ring for engaging with a patient's skin.

8. A surgical device as claimed in Claim 6, in which the fixing means incorporates adjustment means for modifying the length of the sleeve, so as to ensure that the fixing means, distal ring and valves may be brought into close contact with the abdominal wall ensuring a good seal is maintained and that the device is firmly mounted in position.

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9. A surgical device as claimed in Claim 7, in which the proximal ring has an associated connector ring for receiving additional seals or medical instruments.